Industrial Standardization

and Commercial Standards Monthly

November

New Standard for Periodicals

(See Article on Page 303)

1943

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Company Members—Some 2,000 industrial concerns hold membership either directly or by group arrangement through their respective trade associations.

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ASA

Reg. in U.S. Pat. Off.

Standardization is dynamic, not static. It means not to stand still, but to move forward together.

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Wide World Photo

Sandals should not be worn — safety shoes should be worn

for protection of women
on industrial jobs

North American Aviation Co.

This safety-toe shoe prevented serious injury when a heavy steel channel struck the man's foot.

WPB Requires Standard Tests for Safety Shoes

Will protect both men and women against injuries from falling objects, and from dangers due to corrosive chemical action or static electricity

SAFETY shoes must be made to the requirements of the American War Standard Specifications for Protective Occupational Footwear, according to the amended edition of Conservation Order M-217, issued October 18 by the War Production Board. Prepared by the Textile, Clothing, and Leather Division of WPB, the amendment provides that "no person shall manufacture any safety shoes which have leather uppers with leather or rubber (including synthetic rubber) compound bottoms, except those which comply in respect to types, patterns, materials, method of construction, labelling, and all other details with the American War Standard Specifications for Protective Occupational Footwear, published by the American Standards Association."

In this order, the Textile, Clothing, and Leather Division for the first time uses American War Standards as a basis for control of production; and, for the first time, nationally acceptable standards are available for performance and test of safety shoes.

The ASA War Committee on Protective Occupational Footwear which prepared the standards was set up at the request of the War Production Board and the Office of Price Administration because of urgent problems in the production and use of safety shoes. In the first place steel is a critical material. Every ounce of toe-box steel going into safety shoes is allocated on a priority basis. For this reason it is essential that the investment of this critical material be safeguarded by being incorporated into a shoe durable enough to provide maximum functional serviceability. Then, too, safety shoes normally receive harder use under more severe service conditions than street shoes and therefore need better grades of leather. These rank high on our list of critical materials and as with steel must not be wasted in poorly constructed shoes.

No Safety Shoes for Women

Up to the time the ASA War Committee was organized no safety-toe shoes had been manufactured for women, since the need for workers in war production has now brought women into heavy industry for the first time. Safety engineers have been appalled at the variety of footwear favored by women in industry—open-toed sandals, play shoes, and even house slippers have been worn, none of which are satisfactory, let alone protective.

For men's safety shoes, which have been manufactured for many years, individual manufacturers have had their own specifications but no agreement has ever before been reached as to the tests which the finished shoes should meet or the performance requirements which should be specified for them.

Most of the important safety shoe manufacturers were represented on the War Committee, and before the standards were finally approved by ASA every manufacturer was given an opportunity to send in comments and criticisms. They agreed that it was to their advantage, as well as to the advantage of the war effort, to develop nationally recognized performance and construction requirements.

Requirements Based on Research

To give the committee the necessary information on which to base its decisions, a thoroughgoing research program was carried through on all types of shoes being considered. At the request of the Office of Price Administration, the National Bureau of Standards made compression and impact tests on steel safety toes. Through private laboratories the manufacturers also arranged for and conducted compression and impact tests, as well as conductivity tests on the conductive shoes, and voltage and leakage tests on the explosives-operations (non-sparking) shoes. The results of all these tests provided information that could be used to develop nationally recognized and approved methods of testing the efficiency of the safety shoes, and to specify what protection each type of shoe should provide.

On men's safety-toe shoes the toe box must meet requirements for impact and compression resistance as well as resistance to corrosion. An impact test in which a 50-lb weight having $\frac{1}{8}$ in. diameter striking force is dropped from a distance of 12 inches above the top of the toe box, and a compression test, in which the clearance between the insole and the lowest part of the arch of the toe-box must not be less than $\frac{1}{2}$ in. when the toe-box of the shoe is compressed under a load of 2,500 lb, are provided. Women's safety-toe shoes must be made of steel of specified hardness, thickness, composition, and corrosion resistance; or of other metal giving equivalent compression, impact, corrosion resistance, and offering equivalent functional serviceability.

The American War Standards which must be used in the manufacture of safety shoes, according to WPB Conservation Order, M-217, are:

Men's Safety-Toe Shoes (Z41.1-1943) Men's Conductive Shoes (Z41.3-1943) Men's Explosives-Operations (Non-Sparking) Shoes (Z41.4-1943) Men's Electrical-Hazards Shoes (Z41.5-1943) Men's Foundry (Molders) Shoes (Z41.6-1943)	In one volume 40 cents
Women's Safety-Toe (Oxford) Shoes (Z41.2-1943) Women's Safety-Toe (High) Shoes (Z41.7-1943) Women's Explosives-Operations (Non-Sparking) Shoes (Z41.8-1943) Women's Conductive Shoes (Z49.9-1943)	In one volume 40 cents

For conductive shoes, the electrical resistance must be tested periodically while the shoes are in service. If the resistance of the shoes before they have been cleaned exceeds 450,000 ohms for each shoe, they shall be tested again after they have been cleaned. If the resistance then is less than 450,000 ohms for each shoe, they may be returned to service, but if it is more they must not be used. The testing is to be done with an electrical source of not less than 85 volts nor greater than 600 volts. The circuit is to be designed so that the maximum current on short circuit across the electrodes shall be not greater than 1.8 milliamperes. A load of 75 pounds in the case of men's shoes and 50 pounds for women's assures adequate contact, the standard provides.

Men's electrical hazards shoes must be capable of withstanding an alternating potential of 10,000 volts (rms value) for three minutes without showing a leakage of current of more than 10 milliamperes at any time during the test. Each shoe must also be capable of withstanding the application of 14,000 volts for one minute without showing a leak of current in excess of 14 milliamperes.

ASA Number Identifies Shoes

Safety shoes meeting the requirements of the American War Standards can be recognized by means of an identification stamp which must appear in one shoe of every pair. The stamp will indicate what type of shoe it is; for example, "Conductive Shoe," "Safety-Toe Shoe," or "Electrical-Hazards Shoe." It will also show a Type Number. Conductive, explosives-operations, and molders' shoes, which may be made with or without a safety toe, must be stamped to indicate whether a safety toe is contained in the shoe. For example, in a men's conductive shoe a 6-inch blucher with a lined quarter is Type Z41.3-A; while a blucher oxford with a lined quarter is Z41.3-C. A woman's safety-toe shoe with a leather sole is identified as Z41.2-A.

These performance and construction requirements of the American War Standards, based as they are on the results of research, are expected to be useful to industrial safety departments in the protection of workers after the war as well as in the present war-time emergency production control.

Since these specifications are a new development, however, the ASA War Committee intends to keep them up-to-date with the experience of manufacturers and users of safety shoes and with the results of further research. Revisions of the present War Standards may, therefore, be issued from time to time.

Consumers Ask for Labels To Enforce Price Ceilings

If consumers are to do their part in enforcing price ceilings, grade labeling must be required on canned goods, eggs, and other products which are priced by grade, representatives of 13 national consumer organizations told Fred M. Vinson, Economic Stabilization Director, November 15.

In a letter to Mr. Vinson the 13 groups declared that there is an urgent need for more grade labeling of the type required for meats in the Stabilization Director's order of August 5.

"Without grade labeling," the letter said, "consumers cannot assist in the enforcement of Office of Price Administration orders, as OPA says they must do if enforcement is to be accomplished. Moreover, without grade labeling, consumers cannot even hope to keep their home front pledge to pay no more than ceiling prices for anything they buy."

The letter stated that without grade labeling the product which the farmer sells at a Grade C price may be sold to the public at a Grade A price.

The request for more grade labeling was made by the American Association of University Women; American Home Economics Association; Congress of Women's Auxiliaries—CIO; Consumer Interest Committee, National Federation of Settlements; Council for Social Action, Congregational Christian Churches; Delta Sigma Theta Sorority; United Automobile Workers—CIO; League of Women Shoppers, Inc; National Council of Jewish Women; National Consumers League; Ladies Auxiliary, Brotherhood of Sleeping Car Porters—AFL; National Congress of Parents and Teachers; National Nonpartisan Council on Public Affairs, Alpha Kappa Alpha Sorority.

Boren Committee Submits Interim Report on OPA Standards

A REPORT has been issued by the Boren Subcommittee investigating restrictions on brand names and newsprint of the House Committee on Interstate and Foreign Commerce.[1] The report is an interim one, issued following testimony by representatives of the manufacturers of knitted underwear, manufacturers and distributors of women's rayon hosiery, and manufacturers and distributors of processed foods. The date for future hearings has not yet been announced. It is understood that the OPA testimony has not been completed, and that consumer and labor groups had asked to be heard but have not yet appeared before the committee.

The report covers knitted underwear, hosiery, and foods. It is signed by six members of the committee but was not signed by Representative Francis J. Myers of Pennsylvania.

The record of the hearings ("Brand Names and Newsprint Hearings before a Subcommittee of the Committee on Interstate and Foreign Commerce, House of Representatives, pursuant to House Resolution 98") has been printed by the Government Printing Office.

In making its recommendations, the committee states:

Knitted Underwear

"Testimony given before the committee failed to indicate that standardization of heavy knit underwear for pricing purposes would be of benefit to the war effort. . . .

"Some form of quality control must go with price control, in order to prevent evasion of ceilings through quality deterioration but evidence establishes the fact that it could not be accomplished by the imposition of minimum quality standards. Rather, it would appear that such result could be obtained more effectively by implementing existing price ceilings with an order freezing the existing quality of underwear garments as of a specific day, and the establishment of a simple but effective procedure for the adjustment of ceiling prices in case of quality changes (and the costs involved) due to raw-material substitutions, where critical shortages make this necessary. . . .

"In view of the convincing reasons advanced for not applying the proposed standardization program of the Office of Price Administration to knitted underwear, the committee recommends:

"(1) That the Office of Price Administration abandon the standardization experiment in the field of knitted underwear, by (*a*) abandoning its plans to use arbitrary standards as a basis for the imposition of uniform dollars-and-cents ceilings; and by (*b*) abandoning proposed minimum specifications for quality protection only, since the disadvantages of such quality control would outweigh its advantages.

"(2) That the Price Administrator direct the Chief of the Textile, Leather and Apparel Division to evolve, with the guidance of the Industry's Advisory Committee, a clear-cut and constructive price policy for underwear which would recognize existing conditions and safeguard production of this essential commodity.

"(3) That the Price Administrator foster cooperation with the War Production Board and also with the Office of Civilian Requirements in evolving a program for the knitted underwear industry to synchronize price, production, and manpower policies.

"(4) That the Office of Price Administration, in its treatment of standardization and brand-name problems, not only follow the letter but the spirit of the Taft amendment to the Emergency Price Control Act which explicitly prohibits the use of standardization for pricing purposes except under exceptional circumstances."

Women's Rayon Hosiery

"The regulation is based on the establishment of minimum requirements for the manufacture of women's rayon hosiery. This program reflects the principle of materials and manpower conservation established by the War Production Board in Limitation Order No. L-274. Due to the shortage of rayon yarns for hosiery manufacture, waste of these yarns must be avoided and that can best be accomplished if manufacture of substandard hose is prohibited. Hence the establishment of minimum requirements for women's rayon hosiery both in L-274 and in MPR 339.

"Testimony before the subcommittee did not reveal any opposition to this principle. . . .

"Considerable opposition arises, however, if such minimum standards are to be used as the basis for the establishment of uniform dollar-and-cents ceilings for all manufacturers of women's rayon hosiery. . . .

"The hosiery regulation does not prohibit the manufacture of higher quality merchandise and continuance of the use of brand names. However, all trade testimony before the subcommittee was to the effect that, in practice, the minimum standards established in the regulation would turn out to be fixed standards or maximum standards since the price ceilings do not make any allowances for higher quality merchandise. . . .

[1] See "Standards and Labeling in Controversy," INDUSTRIAL STANDARDIZATION, May, 1943, page 141; "Congress Acts in Controversy over Standards and Labeling," July, 1943, page 205; and "OPA Retains Standards; Drops Grade Labeling," September, 1943, page 263.

"It was clearly brought out in testimony before the subcommittee, however, that the real brand-name problem under MPR 339 is one of distribution costs rather than quality standards. Maintenance of branded hosiery as a special classification under MPR 339 was urged primarily because of the services rendered to retail establishments by brand-name manufacturers. . . .

"Summed up, the members of the committee came to the conclusion:

"(1) That there is not the slightest justification for this regulation under the guise of helping the war effort; and

"(2) That there is not the slightest need for this regulation for consumers' protection.

"Instead, the subcommittee believes—

"(1) That the regulation violates the spirit, if not the letter, of the Emergency Price Control Act and the Taft Amendment.

"(2) That it is discriminatory against brand line manufacturers; and

"(3) That it will prove highly detrimental to the interests of small independent retailers.

"In view of these findings the subcommittee is urging the Office of Price Administration to speed up the reconsideration of the hosiery price order MPR 339 in order to terminate present trade and industry uncertaintees as quickly as possible.

"It is to be hoped that in doing so the Office of Price Administration will avail itself to the fullest extent possible of industry and trade cooperation and will respect not only the letter but also the spirit of the Taft amendment to the Emergency Price Control Act."

Processed Foods

"Hearings on the question of mandatory grading and grade labeling held to date before the subcommittee of the Committee on Interstate and Foreign Commerce have failed to disclose any evidence that mandatory grade labeling of processed foods would further the war effort or be in the public interest . . . the primary question is whether the required use of grading or of grade labeling would contribute to the war effort. . . .

"The agitation for mandatory grade labeling is primarily based on claims that such a system of labeling would afford the consuming public better quality protection than the present system of descriptive or informative labeling of canned goods. . . .

"As far as the protection of food quality is concerned, it would appear that the current wide use of nationally advertised food brand names offers a far more effective protection than a system of mandatory grade labeling would. Grave fears have been expressed before the subcommittee . . . that mandatory grade labeling would foster a tendency, partly due to competition, to lower the general average quality of the merchandise packed, as many packers probably would be forced to pack down to the grade level, rather than to pack a product of higher quality. This conclusion is based on the assumption that under a system of mandatory grade labeling maximum prices would be based on grade A quality without premium concessions for super-quality grades as developed under many food brand names to date. Such a pricing system would effectively block the efforts of brand-name manufacturers to put extra quality into their products. . . .

". . . In the Taft amendment of last July, Congress expressly prohibited both mandatory grade labeling and the required use of grades in pricing except under specific circumstances. . . .

"But with respect to the required use of Government grades in pricing—which in practice means the attempted standardization of the products priced—a difference of opinion appears to exist as to the scope of the Taft amendment. . . . His [the Price Administrator's] position appears to be that he can make mandatory the use of the voluntary Agricultural Marketing Administration grades or any other grading system if he determines that 'no practicable alternative exists.'[2]

"On this basis he has continued the requirement that maximum prices be based on grades, and that deviations from the standards prescribed may not be reflected in prices, in some 57 existing price regulations, including those for the major canned vegetables and some canned fruits.

"In view of the far-reaching consequences of such controversy over the scope of the Taft amendment, the subcommittee urges an early clarification of the restrictions Congress intended to impose on mandatory grading and standardization.

"While the hearings of the subcommittee on Federal grading and grade labeling are to be continued, such a convincing case against mandatory Federal grading and grade labeling has been made that Government agencies are strongly urged to refrain from any further experimentation in this field until the subcommittee submits its final report and recommendations on this subject."

Meat

"On September 13, 1943, the Office of Economic Stabilization issued OES Regulation No. 1 requiring that all beef, veal, lamb, and mutton be graded by Federal graders, according to the uniform grades promulgated by the Department of Agriculture, and that such grades be marked on the carcass and the wholesale cut, and be left on the retail cuts.

[2] For the interpretation placed upon the Taft amendment by the President at the time he signed the bill, see INDUSTRIAL STANDARDIZATION, July, 1943, page 204.

Confucius on Standards (552 - 479 BC)

"Now throughout the empire carriages all have wheels with the same tread, all writing is with the same characters, and for conduct there are the same rules."

—Quotation from the "Doctrine of the Mean," one of the "Four Books" of *The Analects* (C.XXVIII, v 3), Confucius (552-479 BC).

From the *Basic Teachings of Confucius* by Miles Menander Dawson.

"This regulation continued in effect the system initially set up by the Office of Price Administration regulation and was designed to allay widespread fears that following the Taft amendment grading and labeling of meat would have to be discontinued.

"In its price regulations the Office of Price Administration sets ceilings for these meats at various sales levels according to these grades. This system had the support of the industry from the outset. Prior to the issuance of OES Regulation No. 1, continuation of meat grading and labeling was urged by the War Meat Board representing the meat industry.

"No opposition against this system of grading and labeling of meat was voiced at any time in testimony before the subcommittee."

War Standard For Radio Thermocouples

INTERCHANGEABILITY of thermocouples for use with radio-frequency currents from 120 milliamperes to 10 amperes, inclusive, is the purpose of the new American War Standard, Dimensions for External Radio-Frequency Thermocouple Converters (C39.4-1943). Thermocouples covered by this standard are being manufactured widely in the trade, and are found as part of the radio installations in the transports and bombers used today. It is estimated that this new standard covers 90 percent of the thermocouple converters used in radio and electronic equipment.

Both the Signal Corps Standards Agency and the Radio Division, U. S. Navy Department Bureau of Ships have adopted the new standard for procurement.

Now that standard dimensions have been agreed upon, it is planned to work on the standardization of the performance of the thermocouple converters in the most commonly used ranges. This will be done in connection with the forthcoming revision of the American War Standard for Panel-Type Electrical Indicating Instruments (C39.2-1943).

Other Standards to be Developed Later

The new standard is the third War Standard to be approved by the American Standards Association resulting from the work of the ASA War Committee on Electrical Indicating Instruments. The work of the committee showed, however, that there was not sufficient agreement in the industry on the interchangeable dimensions of the thermocouples in other ranges and it was thought advisable to wait until later to set up dimensional specifications for other thermocouple converters.

Use Standard Definitions for Electrical Terms—NEMA

The National Electrical Manufacturers' Association strongly advocates the use of the American Standard Definitions for Electrical Terms (C42-1941) as a means of promoting better understanding. Because definitions are fundamental standards in any technical work and must be clearly understood if a standard is to be of any practical use, it is important that they be consistent at all times, the NEMA Codes and Standards Committee declares. For this reason, the American Institute of Electrical Engineers sponsored within the ASA a project to define all terms which are used in the electrical industry. This standard was approved by the American Standards Association as American Standard Definitions for Electrical Terms (C42-1941). "This work is not the product of one individual, or even a group of individuals," NEMA points out. "It is the sum total of the efforts of three hundred specialists, in almost as many branches." The ASA committee arrived at a set of definitions for the entire industry, which is uniform and which also aids understanding.

The NEMA committee pulls no punches on the importance of following this standard. "Since we have this American Standard for Definitions, it should be carefully followed whenever we have occasion to define a term," it declares. Because the Codes and Standards Committee is fully aware of the desirability of using this standard as a guide, it "strongly expressed the opinion that all definitions in all NEMA standards should agree with those in the American Standard whenever there is one for the term in question."

Standards After the War

"In the transition of industries from a wartime to a peacetime economy, the application of standardization will play a most important part. Many new specifications will be required, the extensive range of emergency standards issued during the war will require review, many prewar specifications will receive overdue revision, and tasks reluctantly set aside during the war will be put in hand."

—From Standards Association of Australia Bulletin, July 1943.

ASA Starts Work On War Standards for Photography

Following the approval by the American Standards Association of a War Project on Photography and Cinematography, a subcommittee has been formed to correlate and coordinate all existing specifications, data, and nomenclature available within the Armed Forces, and to outline the order of the work so that the most important standardization jobs can be undertaken first. Captain Lloyd T. Goldsmith of the Signal Corps' Pictorial Engineering Laboratory is chairman of this subcommittee.

At a meeting held in Washington on October 18, Colonel K. B. Lawton, Chief, Army Pictorial Service, declared:

"There is a real need in the Services for a radically new 16-mm 'Military Model' sound projector, with a design calling for extreme durability and simple operation coupled with ease of maintenance. The services have found that the photographic field is in need of standardization of both equipment and photographic processes."

16-mm Sound Film Projectors High on List

It is expected that of the various types of photographic and cinematographic supplies and equipment, a high priority will be given specifications for 16-mm sound film projectors which are used widely for field use, training, and entertainment films.

The Armed Forces subcommittee has been subdivided into five subcommittees in order that the work may be accomplished more easily. The Film, Paper, and Chemicals Subcommittee is faced with problems concerned with standardizing the packaging of motion picture film; defining such terms as "water-proof," "highly moisture proof," etc.; determining the status of specifications on packaging materials; deciding whether film can be repacked and shipped in the original containers; and defining what is an "equally satisfactory sealed metal container."

Specifications for slide film projectors, operational standards for still camera shutters, and performance specifications on photographic exposure meters and on still picture contact printers lie under the jurisdiction of the Still Photography Subcommittee.

Motion Picture Standards Planned

The Motion Picture Photography Subcommittee has under consideration such topics as the preparation of specifications for 16-mm test films, the processing and printing of both 16-mm and 35-mm, the standardization of aperture size for viewfinders on 35-mm and 16-mm motion picture cameras, and the standardization of terminology used for motion picture negatives and prints. Specifications for interchangeable lenses for both still and motion picture equipment are scheduled to receive prompt attention from the subcommittee.

As yet, no projects for aerial photography and map reproduction have been proposed.

The work on War Standards for Photography was requested by the War Production Board on behalf of the Armed Services, following a meeting at which representatives of the Services as well as of manufacturers of photographic and cinematographic equipment discussed the advisability of undertaking such a job. This committee recommended that a War Committee on Photography be set up at once; and that a subcommittee of representatives of the Armed Forces outline the order of the work so that the most important jobs can be undertaken first.

Standards for Working Conditions To Cut Production Losses

Current difficulties in meeting war production schedules, blamed chiefly on manpower shortages, can be corrected in part by better physical working conditions, Secretary of Labor Frances Perkins reported recently. The report was made on the basis of a survey developed by the U. S. Department of Labor in consultation with the War and Navy Departments, the Maritime Commission, and the War Production Board. The survey summarizes American industrial experience both in the last war and in this war to date.

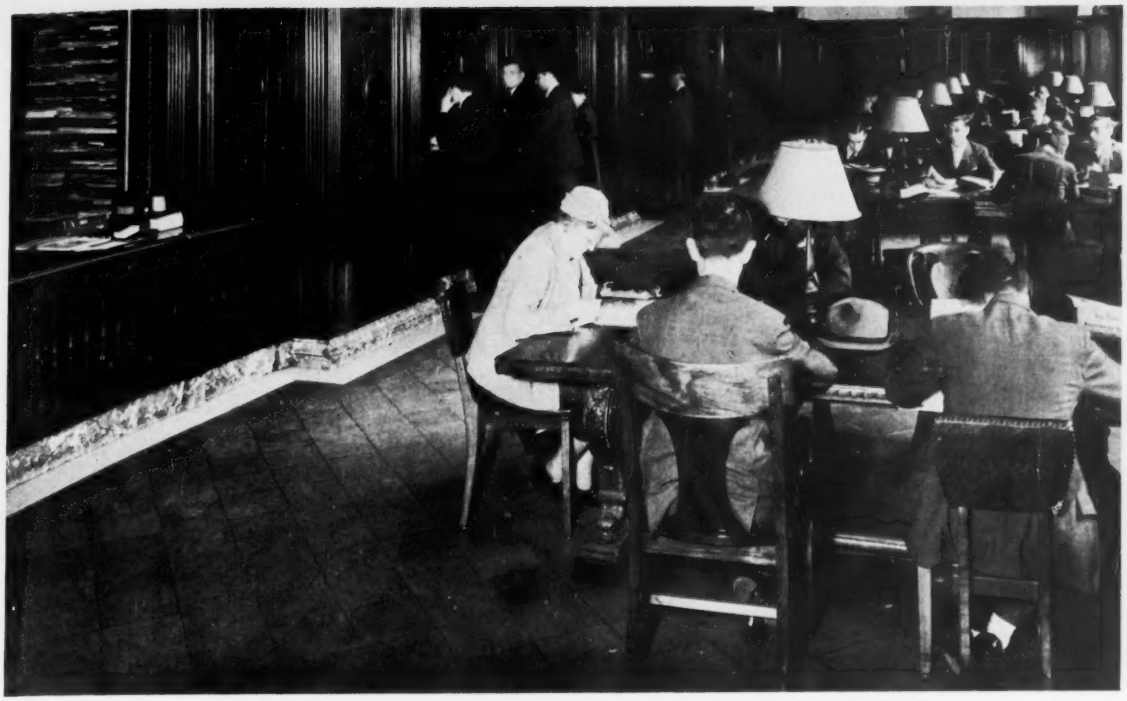
Advisory standards to help correct such conditions have been prepared by the Division of Labor Standards in a pamphlet *Wartime Working Conditions—Minimum Standards for Maximum Production.* These advisory standards are intended to supplement existing requirements under State and Federal laws. They cover technical problems on safety, health and sanitation, and hours of work.

"When conditions leading to injury, illness, excessive fatigue, and under-nourishment are neglected, the plant morale is lowered and the results eventually show up in less output, increased absenteeism, and turn-over," Miss Perkins declared in announcing the new advisory standards.

Copies of the publication may be obtained from the Division of Labor Standards, U. S. Department of Labor, Washington, D. C.

Australia Works on Compressed Gas Cylinders

As a result of wartime demands for industrial gases such as oxygen and acetylene for welding, carbon dioxide for fire-fighting, and the various refrigerant gases, which have brought a marked increase in the use of compressed gas cylinders, the Standards Association of Australia is studying all its standards on the manufacture and use of compressed gas cylinders for possible changes.



Magazines in the periodical room at the New York Public Library are in constant use.

New Standard on Reference Data For Periodicals

"PERIODICALS reach their highest degree of usefulness only if they can be readily referred to in libraries by the millions of people who want to consult them," the American Libraries Association pointed out several years ago when it asked the American Standards Association to undertake a project to help make periodicals more useful to library readers. Members of the Association for years have been struggling with the problems of making such information available to their readers despite the variety of ways in which it has been presented.

The American Standards Association has now approved a revision of an American Standard approved in 1935, under the new title, Reference Data and Arrangement of Periodicals (Z39.1-1943).

The recommendations presented in the new standard represent agreement between representatives of publishers and the libraries, and are now followed to a considerable extent by the majority of publishers. They concern relatively simple and inexpensive practices which will help solve the difficulties that libraries now experience. Librarians hope that the standard will be filed in each publisher's office, in such a manner that it may be referred to by editorial and make-up people, and put into practice wherever possible.

One of the important recommendations has to do with uniform location of information about the periodical. If all magazines print the title, volume, number, and date on the spine of the book reading from the top down, or across the spine if the issue is thick enough, it will save readers trouble in locating the magazine on a library shelf. All issues should be numbered consecutively within each volume, not merely referred to by date, and to help both readers and librarians the general information about the publisher of a magazine (editor's name, business address, price per copy, etc) should always be printed in a uniform location. For easier reading, it is recommended that arabic numerals, not Roman, be used for volume numbers.

Making Bound Volumes More Useful

Since libraries make a practice of binding copies of their magazines into volumes, it is recommended that periodicals should be paged continuously throughout the volume, but that the covers, title page, and

contents page of each issue should not be included in the volume paging. For scientific periodicals, text and advertising should not be mixed and the advertising should be paged separately in order that libraries can bind the scientific articles into a volume for more ready reference by the students who will use them in the future.

In some cases libraries have found difficulty in referring to plates and figures when the pages on which they appear have not been numbered. It is recommended that such pages always be included in the paging of the issue, or that all plates be numbered consecutively throughout the volume if not paged in each issue.

One interesting suggestion has to do with printing corrections on a sheet placed at the front or back of an issue, free from other text, in order that the correction can be clipped and bound with the article to which it refers.

Other recommendations cover what to do when one magazine is absorbed by another, when the title of a magazine is changed, and when supplements are published. Problems of society and institutional publications in connection with reports of meetings, symposia, and monographs are also considered.

The American Standard, Reference Data and Arrangement of Periodicals (Z39.1-1943), a revision of an American Recommended Practice published in 1935, was developed by the ASA Sectional Committee on Standardization in the Field of Library Work and Documentation. This committee, which is sponsored by the American Library Association, has the following membership:

American Library Association, *Lawrence Heyl; Carolyn F. Ulrich*
American Association of Law Libraries, *Sidney B. Hill*
American Council of Learned Societies, *H. M. Lydenberg*
American Documentation Institute, *Watson Davis*
American Library Institute, *Harrison Craver*
Association of College and Reference Libraries, *Robert B. Downs*
Association of Research Libraries, *Rollin A. Sawyer*
Bibliographical Society of America, *H. M. Lydenberg*
Book Manufacturers' Institute, Inc., *Nathan H. Shrifte; A. E. Disney (Alternate); J. Raymond Tiffany (Alternate)*
Library Binding Institute, *Pelham Barr*
Library of Congress, *James B. Child; David J. Haykin (Alternate)*
Medical Library Association, *Janet Doe*
National Publishers Association, Inc, *George C. Lucas*
National Research Council, *William H. Kenerson; Chauncey L. Williams (Alternate)*
Special Libraries Association, *Ruth McG. Lane*
Members-at-Large, *Eileen R. Cunningham; Herman H. Fussler; Ellwood H. McClelland; H. W. Wilson*

Before final approval, a draft of the proposed standard was submitted for criticism and comment to a selected group of library serial department heads and catalogers, periodical publishers, and editors.

Copies of the standard are available from the American Standards Association at 20 cents.

Warwick Resigns WPB Post to Give More Time to ASTM

C. L. Warwick, Secretary-Treasurer of the American Society for Testing Materials, has resigned as chief of the Materials Branch of the War Production Board in order to give more time to the work of the ASTM. He has been appointed as Consultant in the WPB Conservation Division, however, and plans to devote half his time to this work.

Since early 1941 Mr. Warwick has been active in WPB work. He has served as Chief of the Specifications Branch and of its successor, the Materials Branch, and has been administrator of the National Emergency Steel Specifications project. His new duties as consultant include general administrative supervision of specifications work with the Federal Specifications Committees, the Army, Navy, and other Government Agencies, as well as contacts with industrial specifications organizations. He will also have responsibility for the Specifications Library and records.

He will continue as Administrator of the National Emergency Steel Specifications Project and will serve in a consulting capacity in connection with the work in the construction field. In this capacity he will head the Advisory Committee on Conservation in Construction for the WPB Conservation Division.

INDUSTRIAL STANDARDIZATION Used by Australian Industry

The American Standards Association is now sending INDUSTRIAL STANDARDIZATION to subscribers in Australia through the channels of the Standards Association of Australia. This association has received library copies from the ASA for some years. Recently the Association made an arrangement by which it will act as a distributing agent in Australia for ASA publications. This new step was announced by the Standards Association of Australia in its quarterly bulletin. "Impressed by the valuable information contained in this journal Australian industrialists who have seen it, have asked the Association to make it more widely known to Australian industry," the announcement declared.

ASA Celebrates Silver Anniversary at 1943 Annual Meeting

THE American Standards Association has just completed its twenty-fifth year of service to industry and government and is marking this occasion at its annual luncheon meeting to be held at the Hotel Roosevelt on Friday, December 10. R. E. Zimmerman, president of the organization, will give a brief address, and the election of new officers will be announced. H. S. Osborne, chairman of the Standards Council, will report on the year's work.

Clifton E. Mack, Director of Procurement, United States Treasury Department, will be the guest speaker for this occasion. His address will deal with using standards to bring government requirements more nearly into line as a part of the American industrial system. Mr. Mack is in charge of all the government's lend-lease purchasing.

Because of the special nature of this occasion, in commemoration of its 25 years of growth, the ASA extends a cordial invitation to all readers of INDUSTRIAL STANDARDIZATION to attend this meeting even though their companies may not be members.

If you have not received an invitation to the Annual Meeting, write at once to the American Standards Association, 29 West 39 Street, New York 18, N. Y., and arrangements will be made for you to attend. Luncheon is at one o'clock, at the Hotel Roosevelt, New York.

British Offer Handbook Of Workshop Standards

"Lack of national standardization has already cost this country millions of man-hours of skilled labor, a loss which is of very substantial significance in peace time and becomes gravely serious in war time," declares Sir William Reavell, K.B., chairman of the Engineering Divisional Council, British Standards Institution. His statement is made in his introducton to the British Standards Handbook No. 2, *British Standards for Workshop Practice*, in which the essential technical data from British Standards applicable to engineering workshops are compiled. The quantity of non-standard tools and gages which are continually being ordered has been a matter of much concern, it is explained, and these standards have been gathered together and published in one convenient volume in order that every engineer concerned with design or manufacture may have, for his guidance, the latest British Standard practice. The volume includes summaries of standards giving basic sizes and tolerances of pipe threads; keys and keyways; screws and screw threads; milling cutters and reamers; limits and fits for engineering; ball bearings; twist drills; rivets; machine tool elements; bolts and nuts; tolerances for limit gages; data on cast iron; recommended designs for plug, ring, and gap gages; and British Standards for aircraft materials, among others.

In a Foreword to the *Handbook of Workshop Practice*, James C. Blair, British Deputy Controller-General of Machine Tools, declares:

"No one will deny the economies in time, cost, and facility of manufacture that can be obtained by adherence to standards. These factors permeate throughout the whole fabric of production, from design to the finished product, and it should be the duty of everyone to see that standards are never departed from without overwhelming justification, in fact departure from standards should only be authorized by the highest executive.

"It is my hope that this publication will receive the fullest support and that steps will be taken in every factory to see that copies are available to everyone concerned with design."

British find "economics in time, cost, and facility of manufacture" from use of standards in workshop practice.

New Zealand To Certify Goods

WITH registration of its standard mark as a certified trade mark, New Zealand has started a program of certification of those products which comply with New Zealand Standard Specifications. This standard mark will be made available, under license, to manufacturers and other trading interests for use on such commodities. In this way, purchasers will be enabled to distinguish goods which conform to standard specifications from those which do not. The New Zealand Association declares that the main advantages of a system whereby goods manufactured or produced according to standard specifications are identified by a standard mark may be summarized as follows:

"(*a*) It will give to the numerous small-quantity purchasers who cannot buy to specifications the maximum benefit of purchasing on a basis of known quality in relation to quantity and price.

"(*b*) It will discourage the manufacturer of goods of inferior quality and type, which simulate higher-quality goods in an endeavor to win the market on a basis of false confidence and lower prices.

"(*c*) It will encourage the concentration of production on more legitimate lines and the elimination of redundant types, thus securing the fuller benefits of mass-production methods. It will also reduce the costs of distribution in proportion to the reduction of redundant types.

"(*d*) It will bring about a general recognition that Standards Specifications afford the most sensible and economic basis for business transactions because they reduce to a minimum haphazard methods of specifying, manufacturing, testing, and buying."

The New Zealand Standards Council adopted during the year 38 regular Standard Specifications, five of which originated and were developed in New Zealand. The remaining 33 were British Standards, which have been carefully examined by appropriate committees and the groups concerned, with a view to determining whether they were suitable for adoption.

Thirty-six War Emergency Standards were completed during the year. Of these, 13 were issued for purposes of simplification and relate to a wide variety of subjects including clothing, bread, footwear, glass containers, household furniture, doors, milking-machine rubberware, and filter pads for gas-producers. There are 118 War Emergency Standards, which added to the Regular Standards make a total of 505 New Zealand Standard Specifications.

Standardization Articles Of Interest to ASA Members

Economic Aspects of Standardization. By B. C. Boulton, *SAE Journal*, June, 1943, Society of Automotive Engineers, 29 West 39 Street, New York 18, N. Y.

This article reviews some of the more important accomplishments of the National Aircraft Standards Committee, and brings out the economic importance of standards work in increasing the production of aircraft and lowering their unit cost to the Government. It also indicates the effect of standards work on the post-war production costs of aircraft.

Lubricants for Ordnance Combat and Motor-Transport Vehicles. By Major R. E. Jeffrey, Jr., *SAE Journal*, October, 1943. Society of Automotive Engineers, 29 39 Street, New York, N. Y.

"Standardization of lubricants for the Army has had a very important bearing on military operations, as well as a definite influence on commercial activities during the emergency." Major Jeffrey discusses the reduction of number of types and grades to the minimum consistent with satisfactory performance; the development of types and grades to fit the military applications involved; and development of satisfactory U. S. Army specifications to cover adequately the necessary materials.

Standardized Heating and Ventilating Equipment for Fighting Ships. By Thomas H. Urdahl, Commander, USNR, and John Everetts, Jr., Lieutenant, USNR, *Heating, Piping and Air Conditioning*, July, 1943. Keeney Publishing Company, 6 North Michigan Avenue, Chicago 2, Ill.

"The heating, ventilating, and air conditioning industry has been in the front rank in cooperating with the Navy in speeding the war effort through (1) fundamental research in both engineering and physiological fields; (2) simplification of design practices and their application; (3) training in design, maintenance, and operation; (4) conversion of production facilities." Commander Urdahl and Lieutenant Everetts stress the importance of the Navy's standardization program, giving the reasons for it and showing its application to fans, portable heaters and reheaters, supplementary space heaters.

Why Specifications? By Rolf T. Retz, *Civil Engineering*, October, 1943. American Society of Civil Engineers, 33 West 39 Street, New York 18, N. Y.

"As engineers, we have a solemn duty to eliminate red tape wherever we find it. This is particularly imperative in wartime when such inefficiency may prove extremely costly in materials and life. We have therefore a double duty to review our practices in specification writing." In this article, Mr. Retz outlines some of the troubles that may arise from bad specification writing, and warns against complicated and confusing writing, over-fussy requirements and ambiguity. He suggests that the same degree of excellence should be obtained in writing specifications as in making engineering drawings, and recommends training in specification writing. He also recommends reference to applicable national standard specifications. "A wonderful tool is at hand in the documents of a number of national organizations," he says, "such as the American Society for Testing Materials, the American Standards Association, the American Institute of Steel Construction, and others."

Brady Honored by Argentine Safety Institute

C. T. Brady, Jr., ASA Field Representative in South America, has been appointed honorary member by the Instituto Argentino de Seguridad (Argentine Safety Institute).

British Combine Photos, Ltd.

Plans for designing buildings to resist enemy action are included in the new British building code. What happened when the Germans bombed Bath, England, is shown above.

First British Building Code Recommends Minimum Loads

THE first draft standard under the British Building Codes and Practices program is now being circulated by the British Standards Institution before consideration for final approval. It recommends the minimum loads which should be taken into account in the design of buildings, for use with working stresses based on the properties of the various materials. No account has been taken, however, of constructional loads. One section of the proposed standard makes recommendations for dead and superimposed loads and forces induced by wind, and is for conditions that are normal for Great Britain. The effect on buildings of enemy action in time of war is considered in the second section, and buildings are classified in terms of their resistance to such action.

To Develop Series of Codes

The British building code program plans for the development of a series of building codes as well as a Classification Code. This Classification Code, of which the draft standard on loads is to be Chapter V and is the first to be completed, will contain functional requirements of buildings of different types irrespective of the method of construction adopted. The general series of Codes will deal with the methods of using the selected materials in order to achieve the functional requirements of the building.

It is planned that the Classification Code will have chapters on natural light and air; space and circulation; precaution against noise; precaution against fire; strength—stability and loadings; weather protection; services—heating, lighting, water supply; heat insulation; corrosion; and dirt and vermin.

The new draft standard, which is scheduled as Chapter V on Strength—Stability and Loadings, was developed by a technical drafting group under the general direction of the Coordinating Committee of the Codes of Practice Committee for Civil Engineering, Public Works, Building, and Constructional Work. This Codes of Practice Committee consists of representatives of the principal technical societies, the British Standards Institution, the Building Industries National Council, members nominated by certain Government Departments, and a chairman appointed by the Minister of Works and Planning. The British Standards Institution circulates the draft standards to the groups concerned for criticism and comment.

In preparing this draft standard an attempt was made to study all relevant material in recently published codes, reports of committees, and results of research. The recently approved National Building Code of Canada, the Building Code of the State of California, the Pacific Coast Building Code, and the German Building Code of 1941 were all studied as sources of information by the technical committee. "In the field of research and investigation," the committee reports, "the most comprehensive work on floor loads appears still to be the survey by the U. S. Bureau of Standards by its Committee on Building Regulations."

Use Research on Wind Pressure

One important source of information used by the committee was the research on wind pressures in buildings carried out at the National Physical Laboratory for the Wind Pressures Committee of the Building Research Board, which was completed shortly before the war. "The results of this research," the introduction to the new standard explains, "showed that the assumptions which had previously been made as to the magnitude and mode of action of wind pressures on buildings were at variance with the conditions found in the experiments and in measurement on buildings. There has been a considerable weight of evidence that the established rules for computation of wind pressures did not accord with practical fact—notably the frequency of the stripping of tiles and sheeting from roofs by forces of uplift on windward as well as leeward slopes, which could hardly be explained on the assumption of the existence of heavy external pressures in high winds. Since the preparation of the Classification Code marks a definite step forward in building practice, it was felt that the results of the wind pressures research should be included even though the research data had not yet been published."

It is recommended that the loads proposed in the new draft standard should be applied to all methods of construction alike, and that the working stresses used in design should be based on the properties of the various materials.

It is planned to publish a comprehensive alphabetical list of floor space occupancies and superimposed floor loads and to give supplementary information regarding the weight of various commodities in storage buildings.

Copies of the proposed British Standard Code of Practice on Strength—Stability and Loadings have been received by the American Standards Association and may be borrowed from the ASA Library.

New Photometric Units Adopted in Germany

THE National Bureau of Standards has learned through the Swiss Association of Electrical Engineers that a formal change to a "new" system of photometric units, replacing both the international and the Hefner, has been made in Germany. Before the war interrupted normal international relations, plans had been made to introduce this new system throughout the world on January 1, 1941. Although the change was made by Germany on the date set, the factors for converting values from the Hefner system to the new system were not published until 1942 and some doubt remains as to the extent of use of the new units in actual practice, the National Bureau of Standards reports.

Two Systems Differ

The two systems of units hitherto in use have differed not only in the magnitude of the basic unit but also in the relation between lights of different colors. The fundamental difficulty which has delayed the general adoption of any one system has been that the establishment of a basic unit for light of one color is only a partial solution of the problem. There must also be a uniform method for passing from that color to others and that method must be chosen somewhat arbitrarily since there is no ground for saying that any one method is correct.

The principles of the new system were accepted internationally in 1937 and were originally established by the American Illuminating Engineering Society on the basis of measurements made at the National Bureau of Standards [BS Scientific Paper 19, 131 (1923-24) S475]. They have since been accepted by the International Commission on Illumination and the International Committee on Weights and Measures.

The Task Group of the ASA War Committee on Radio which prepared the American War Standard for Fixed Composition Resistors has the following membership:

F. K. Priebe, Fort Monmouth Signal Laboratory
A. R. G. Albright, Navy Department, Bureau of Ships
R. J. Biele, General Electric Company
R. F. Courter, The Carborundum Company
P. S. Darnell, Bell Telephone Laboratories
W. R. Dohan, RCA Victor Division, Radio Corporation of America
G. G. Herrick, Speer Resistor Corporation
C. E. Ingalls, Radiation Laboratory, Massachusetts Institute of Technology
S. W. Kelly, Allen-Bradley Company
W. M. Kohring, Continental Carbon, Inc.
Jesse Marsten, International Resistance Company
Byron B. Minnium, Erie Resistor Corporation
A. M. Okun, Aircraft Radio Laboratory, Wright Field
H. J. Schmitz, Western Electric Company
George R. Sparks, Camp Evans Signal Laboratory
H. L. Spencer, Quality Engineer, Bendix Radio, Division of Bendix Aviation Corporation
L. L. Stoffel, The Ohio Carbon Company
T. A. Swartz, Chief Chemist, the S. S. White Dental Manufacturing Company
N. Vasileff, Fort Monmouth Signal Corps
H. A. Williams, Stackpole Carbon Company
Major A. J. Garson, Signal Corps Standards Agency, *Chairman*

War Standard Outlines Tests For Radio Resistors

A NEW American War Standard covering the most widely used components of radio equipment—solid composition or film types of resistors, commonly known as fixed composition resistors—has just been approved by the American Standards Association. The new standard sets up tests and test limits to determine the useful life of the resistors, their performance characteristics, including solderability in circuits, noise characteristics, and ability to withstand wide extremes of temperature and humidity, as well as salt water immersion. These tests, agreed upon for the first time between the resistor manufacturers and the ultimate consumers—the equipment manufacturers, and the United States Army and Navy—are intended to prevent failure under the severe conditions of service in the field. In addition to the tests and performance requirements, the document specifies standard dimensions, standard resistance values, and ratings for resistors of the quality required by the Armed Forces.

Production Has Increased

Fixed composition resistors are either the solid type which consists of a mixture of graphite and a binder, or the film type which consists of a film of resistive material deposited on an insulating surface. These resistors offer an inexpensive, compact method of obtaining resistance for low-wattage dissipations. They have made modern radio equipment possible, since wire-wound resistors of equivalent electrical characteristics would be expensive and bulky. Their production has increased tremendously within the last couple of years, and although no accurate production figures are available at the present time in view of the war situation, it is estimated that one-half billion resistors are manufactured annually in the United States.

Standard Tests More Thorough

Tests of resistors under the new American War Standards for Fixed Composition Resistors are now being conducted jointly by the United States Army Signal Corps and the Radio Division of the United States Navy, Bureau of Ships. At no time previously have such thorough and extensive comparative tests been conducted on this product, and it is expected that there will probably be a revision of this standard when the tests have been completed.

The standard has been approved for use by the U. S. Signal Corps and the U. S. Navy, Bureau of Ships, Radio Division, in procuring resistors for radio and electronic equipment. It is expected that it will control the preparation of new manufacturing facilities for resistors which are now being expanded because of a service shortage of these parts. Designers of radio equipment are expected to utilize the standard as extensively as possible in order that maximum production may be had with a minimum waste of time and material, and in order to facilitate servicing of equipment in the field.

Copies of the American War Standard for Fixed Composition Resistors (C75.7-1943) are axailable from the American Standards Association at 60 cents. For procurement purposes only, it may be obtained without charge from the government agency concerned.

Acme Newspictures

A "walkie-talkie" radio set in action. Fixed composition resistors made modern radio equipment possible.

Australia Uses ASA War Work on Radio

The entire series of American War Standards on Radio has "created an extraordinary amount of interest in Australia, and has proved of the utmost assistance to our Government departments and to industry engaged on work for the Government," W. Rayner Hebblewhite, chief executive officer of the Standards Association of Australia, writes the American Standards Association. The Australian Association has endorsed the American War Standard on Ceramic Radio Insulating Material, Class L (C75.1-1943) as an Australian War Emergency Standard, and in order to make copies available immediately is printing it in the Australian Emergency Series.

NFPA Publishes Codes for Fire Protection

A 504-page volume, bringing together the many standards dealing with the prevention of fires incident to the handling, storage, and use of flammable liquids, gases, chemicals, and explosives has just been published by the National Fire Protection Association. The new volume, entitled *National Fire Codes for Flammable Liquids, Gases, Chemicals, and Explosives, 1943*, is divided into nine parts: Flammable Liquid Storage and Handling; Oil and Gasoline Burning Equipment; Liquefied Petroleum Gases; Utilization of Flammable Liquids; Gases; Refrigeration and Fumigation; Explosive and Nitrocellulose Materials; Tables of Properties—Hazardous Chemicals, Flammable Liquids; Flash Point Tests.

The several codes are in the form of suggested ordinances, standards, or recommended good practice requirements. They are universally recognized and used as the authoritative guides to the best practice. Although the codes are purely advisory as far as the NFPA is concerned, they are widely used as a basis of law, or by administrative authorities in the exercise of their discretionary power, as well as by property owners as a guide to good practice, and for insurance purposes. In preparing standards the aim of the NFPA committees is to specify measures that will provide reasonable fire safety without prohibitive expense.

The book, which contains many tables and drawings, may be obtained from the National Fire Protection Association, 60 Batterymarch Street, Boston 10, Massachusetts at $3.00 per copy postpaid.

War Committee to Develop Safety Standards for Welding

An ASA War Committee has been organized and its membership approved by the chairman of the Standards Council to develop an American War Standard for Safety in Electric and Gas Welding and Cutting Operations.

The work was started at the request of the Division of Labor Standards, U. S. Department of Labor; the National Electrical Manufacturers Association; the American Welding Society; and the International Acetylene Association. All of these groups agreed that the extent of welding operations now carried on in connection with war work, and the importance of conserving manpower, make it necessary to put into effect all safety procedures for the protection of employees.

There have been no safety standards for welding operations until very recently. A few months ago the New Jersey Department of Labor put into effect regulations for safety in welding, and safe practice recommendations have now been prepared by the National Safety Council, the International Acetylene Association, and the National Fire Protection Association. All these proposals are being studied as the basis for the first draft of the American War Standard.

New ASA Company Members

The following companies have become new Members of the American Standards Association:

Ampco Metal, Inc, Milwaukee, Wisconsin
W. W. Boes Company, Dayton, Ohio
The Hoover Company, North Canton, Ohio
Kelman Electric & Manufacturing Company, Los Angeles, California

Spanish Primer Gives Data on Standards

The Inter-American Department of the American Standards Association has published for the Spanish-speaking countries of Latin America a primer of standardization, *Elementos de Normalizacion Industrial*. This pamphlet was written for those who are interested in standardization and want to know more about the philosophy back of it and how it operates. It is for the lay reader rather than for the engineer or technician. In its pages are found data on the significance of the word "standardization"; a resume of the advantages to be derived from applying standardization methods to industry; information on the procedure used to develop national standards in various countries; and a discussion of the international standardization movement.

Australian Emergency Standards Conserve Rubber

Emergency specifications have been published by the Standards Association of Australia to conserve rubber in rubber-insulated cables and flexible cords (Australian Standard (E)C.502-1943). This emergency standard provides for modification of the following "normal" specifications to meet wartime conditions:

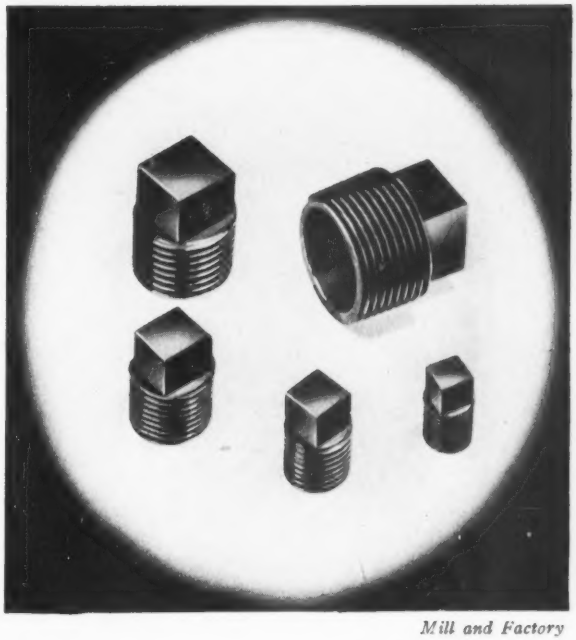
C.50-1939. Rubber-Insulated Cables and Flexible Cords.
C.81-1941. Trailing Cables for Mining Purposes.
C.116-1941. Flexible Cords (for Power and Lighting Purposes).
C.130-1941. Cables.

The emergency standard provides for the use of insulating material requiring little, if any, raw rubber in its manufacture. Immediate adoption of its provisions, its is hoped, will permit conservation of raw rubber supplies available for cable manufacture to such an extent that the quality prescribed will be maintained for some time.

Pipe Plugs and Bushings Standards Published in One Volume

FOR the convenience of users, a new American Standard has just been approved which brings together in one document the various standards covering pipe plugs, pipe bushings, pipe caps, and locknuts used in piping systems and other piping applications. The new combined standard is known as American Standard for Ferrous Plugs, Bushings, Locknuts, and Caps with Pipe Threads (B16.14-1943).

The sections of the new standard which cover pipe plugs were originally published as American Standard B16e2-1936. This 1936 standard was developed by a subcommittee of ASA Sectional Committee B16, which in preparing the standard made use, to a large extent, of material assembled by the Manufacturers Standardization Society of the Valve and Fittings Industry. The proposed standard was distributed by the ASA committee to a canvass of industry and the resulting comments and criticisms were considered by the committee before the final draft was completed.



Mill and Factory

Used in Drain Connections and Machinery

The plugs covered are not only used in connection with pipe fittings but in many other services where it is necessary to plug up a hole, such as in drain connections on equipment of all kinds. They are also used in large quantities by the automobile industry and by builders of machinery. The dimensions of the square heads and the sockets, therefore, are made to conform to the sizes of standard open-end wrenches and to the maximum dimensions of standard hot rolled steel bars, respectively.

The American Standard dimensions for pipe bushings and locknuts were originally included in the American Standard for 150 Lb Malleable-Iron Screwed Fittings (B16c-1939).

Originally the American Standard dimensions for pipe caps appeared both in the American Standard for 125 and 250 Lb Cast-Iron Screwed Fittings (B16d-1941) and in the American Standard for 150 Lb Malleable-Iron Screwed Fittings (B16c-1939).

Inclusion of all these standards in the new American Standard for Ferrous Plugs, Bushings, Locknuts, and Caps will bring together all of the fittings having a similar function.

The work of Committee B16 which developed the piping and pipe plug standards is under the sponsorship of the American Society of Mechanical Engineers, the Heating, Piping, and Air Conditioning Contractors National Association, and the Manufacturers Standardization Society of the Valve and Fittings Industry.

Copies of American Standard B16.14-1943 are available from the ASA at 40 cents.

Conservation Exhibit Is Held in Washington

The CPRB-CRMB[1] Combined Conservation Committee is sponsoring a conservation exhibit showing the progress that has been made in conservation of materials and manpower, through substitution, simplification, standardization, and improved production techniques. Actual examples of manufactured items covering a broad field are on display, and both Canada and the United States are represented.

The Exhibition is being held in Room 1622, Social Security Building, Washington, D. C., and will be open to manufacturers and others interested, from 9:00 a. m. to 5:00 p. m. for a period of 30 days beginning Wednesday, November 10 and ending Tuesday, December 7.

The exhibit includes displays sponsored by the Industry Divisions of the War Production Board, as well as the Army, the Navy, Maritime Commission, Office of Production Research and Development, the Joint Committee on Rescue Equipment, and others. A number of exhibits include both "before" and "after" examples, and offer graphic evidence of the improved techniques and conservation practices that have been largely responsible for the unprecedented production records set in the past year, and the tremendous man-hour savings that have been effected both in the United States and Canada.

Entry to the Exhibition may be obtained by applying at the Reception Desk in the Social Security Building, where special visitors' passes will be issued.

[1] Combined Production and Resources Board (Canada) and Combined Raw Materials Board (United States).

Standards Issued by Associations and Government

(See "ASA Standards Activities", page 314, for new American Standards and progress on ASA projects)

For the information of ASA Members, the American Standards Association gives here a list of the standards received during the past month by the ASA Library for its classified files. With the increasing amount of material being received it has been decided to eliminate from the monthly list a few of those standards which may not be so important to ASA Members, such as Federal Specifications for foods. The list below, therefore, includes only those standards which the American Standards Association believes will be of greatest interest to Members in connection with their war production.

The standards listed may be consulted by ASA Members at the ASA Library, or copies may be obtained from the organization issuing the standard. Addresses of these organizations are given for your convenience.

Associations and Technical Societies

American Society for Testing Materials (260 S. Broad Street, Philadelphia 2, Pa.)

Methods for Chemical Analysis of Metals 1943
Petroleum Products and Lubricants September 1943

Society of Automotive Engineers (29 West 39th Street, New York 18, N. Y.)

New and Revised Aeronautical Material Specifications October 1, 1943

U. S. Government

National Bureau of Standards (Washington, D. C.)

Color and Legibility Letter Circular LC-730 (superseding LC-351) August 18, 1943
List of Commercial Standards Letter Circular LC732 October 1, 1943
Methods of Using Standard Frequencies Letter Circular LC-731 August 28, 1943
Report on Relative Slipperiness of Floor and Deck Surfaces May 1, 1943
Structural Fiber Insulating Board (third edition) Commercial Standard CS42-43 (superseding CS42-35) August 25, 1943

Federal Specifications Executive Committee (U. S. Treasury Department, Washington, D. C.)

Federal Specifications

(Copies available from Superintendent of Documents, Government Printing Office, Washington, D. C.)

The date after the title of the specification indicates when it becomes effective.

Axes (superseding GGG-A-926) GGG-A-926a November 15, 1943
Cable and Wire:
- Rubber insulated, building-type (0 to 5000-volt service) (amendment 1) (superseding E-J-C-103, 7/18/42) J-C-103 November 1, 1943
- Rubber insulated, (for) other than building-purposes, superaging grade (0 to 8000-volt service) (amendment 1) superseding E-J-C-121, 8/24/42) November 1, 1943

Cement:
- Hydraulic; General Specification (Methods for Sampling, Inspection, and Testing) (amendment 1) (superseding E-SS-C-158a, 6/5/42) SS-C-158a October 15, 1943
- Portland, High-Early-Strength (amendment 1) (superseding E-SS-C-201a, 6/5/42) SS-C-201a October 15, 1943
- Portland (amendment 1) (superseding E-SS-C-191b, 6/5/42) SS-C-191b October 15, 1943
- Portland, (amendment 1) Moderate-Heat-of-Hardening (superseding E-SS-C-206a, 6/5/42) SS-C-206a October 15, 1943

Cotton:
- Duck: bleached CCC-D-730 October 1, 1943
- Thread: (amendment 2) V-T-276b October 15, 1943

Flux, Soldering; Paste F-F-506 October 15, 1943

Federal Specifications—(Continued)

Funnels, Glass; Smooth (Chemical) (amendment 1) DD-F-806 November 15, 1943
Instruments; Drawing, Nickel-Silver (First Grade) (superseding GG-I-531) GG-I-531a November 1, 1943
Knives; Linoleum, Plumbers'-chipping, Putty, Scraping, and Shoe (amendment 4) GGG-K-481 November 15, 1943
Motors; Alternating-Current, Integral-Horsepower CC-M-641 October 15, 1943
Nails; Spikes; Staples; and Tacks (amendment 4) FF-N-101 November 15, 1943
Paint:
- Blue-Lead-Base; Basic-Sulfate, Linseed-Oil, Ready-Mixed (amendment 1) (superseding Emer. Alt. Fed. Spec. E-TT-P-20, 4/25/42) TT-P-20 November 15, 1943
- Brushes: Metal-Bound, Flat (High grade) (amendment 3) (superseding amendment 1 and Emer. Alt. E-H-B-431, 9/2/42) H-B-421 November 15, 1943
- Brushes: Metal Bound, Flat (Medium Grade) (amendment 2) (superseding amendment 1 and Emer. Alt. E-H-B-431, 9/2/42) H-B-431 November 15, 1943
- Cold-Water, Exterior, Powder (with mixing liquid) TT-P-22 November 1, 1943
- Graphite, Outside, Ready-Mixed, Black (amendment 1) (superseding Emer. Alt. Fed. Spec. E-TT-P-27, 4/25/42) TT-P-27 November 15, 1943
- Iron-Oxide, Ready-Mixed, Black (amendment 1) (superseding E-TT-P-31a, 1/6/42) TT-P-31a October 15, 1943
- Oil; Flatting and Mixing (for Thinning White-Lead-Paste and Similar Paste Paints) (superseding TT-O-356 and Emergency Alt. E-TT-O-356, 4/3/42) TT-O-356a November 1, 1943
- Oil; Linseed-replacement (for thinning paints and pastes in oil) (amendment 1) TT-O-371 November 1, 1943
- Outside, ready-mixed, medium-chrome-yellow (amendment 1) (superseding E-TT-P-53, 2/24/42) TT-P-53 November 1, 1943
- Primer; Zinc Dust-Zinc-Oxide (For Galvanized (Zinc coated) or Zinc Surfaces) (amendment 1) (superseding Emer. Alt. Fed. Spec. E-TT-P-641, 4/25/42) TT-P-641 November 15, 1943
- Ready-Mixed, and Semipaste, Black (amendment 2) (superseding amendment 1 and E-TT-P-61, 1/6/42) TT-P-61 October 15, 1943

Ready-Mixed, International-Orange (amendment 1) (superseding Emer. Alt. E-TT-P-86, 8/28/42) TT-P-86 November 15, 1943
Yellow-Iron-Oxide; Hydrated, Synthetic, Dry (Paint Pigment) TT-T-216 October 15, 1943

Paper:
Lens tissue (superseding UU-P-313) UU-P-313a November 1, 1943
Stencil, Duplicating-Machine, Dry-Process UU-P-545 October 1, 1943

Picks; Ice GGG-P-323 October 15, 1943

Pins; Office (superseding FF-P-401a, and Emer. Alt. E-FF-P-401a, 9/2/42) FF-P-401b November 15, 1943

Receptacles (Convenience Outlets); Attachment-Plugs, Current-Taps, and Connectors (superseding amendment 2 and E-W-R-151, 3/17/43) (amendment 3) October 15, 1943

Steel:
Castings; (amendment 1) QQ-S-681b November 1, 1943
Corrosion-Resisting; Bars and Forgings (Except for Reforging) (superseding QQ-S-763) QQ-S-763a November 15, 1943
Strapping, Flat; Steel (amendment 1) (superseding E-QQ-S-781a, 2/20/43) QQ-S-781a October 15, 1943

Emergency Federal Specifications

Paper; Mimeograph (superseding E-UU-P-388a, 7/22/43) E-UU-P-388a September 8, 1943

Quarterly Index

Quarterly Supplement-Index of Emergency Alternate Federal Specifications. September 1, 1943

U. S. Department of Labor (Washington, D. C.)

Wartime Working Conditions Minimum Standards for Maximum Production Special Bulletin No. 13 October 15, 1943

U. S. Office of Civilian Defense (Washington, D. C.)

Fire Guard Instructor's Manual OCD Publication 2017 June 1943

War Food Administration (Washington, D. C.)

Tentative U. S. Standards for Classes and Grades for Live Poultry November 1, 1943

Army Air Forces

Material and Process Specifications Bulletin No. 23 October 10, 1943

WPB Orders Fewer Sizes of Large Scales

A recent order of the War Production Board cuts down the number of sizes and models of large-capacity scales used for commercial purposes, and the WPB expects thereby to save several thousand tons of steel annually. It also expects to increase the productive capacity of the industry about 20 percent and to make production facilities available for conversion to ordnance production. Eight new schedules under Order L-190 (Scales, Balances and Weights) make this simplification program effective. They restrict production of railway track scales, motor truck scales, portable beam scales, rolling mill scales, portable dial scales, self-contained floor scales and built-in floor scales. Wood will be substituted for concrete in motor truck scales.

Standard, descriptive terms used in identifying the various types of scales are expected to have an effect in standardizing industry terminology.

The Division of Weights and Measures of the National Bureau of Standards cooperated in drafting the new schedules and concurred in issuing the schedules. This action has the effect of prohibiting, for the duration, the manufacture of scales which meet specifications developed and encouraged by the Bureau over many years.

New Foreign Standards Now in ASA Library

The following new and revised standards, just received by the American Standards Association, may be borrowed by ASA Members, or ordered through the ASA Library.

Great Britain

Draft British War Emergency Standards

Polarograph and Spectrograph Method of Analysis of Zinc Alloys CG (NF) 3187
Rolled Asphalt CG (RD) 3759
Wire Nails CG (B) 3710

Stress Grade Lumber Specifications Established by WPB

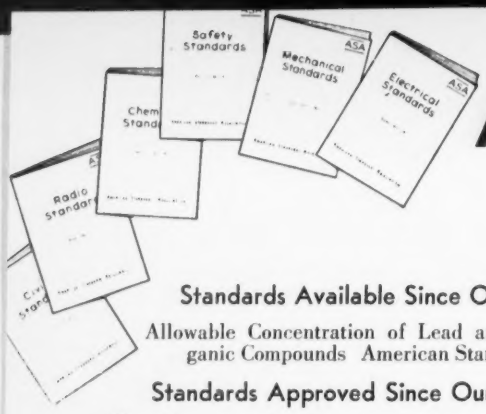
National Emergency Specifications for the Design, Fabrication, and Erection of Stress Grade Lumber and Its Fastenings for Buildings have been established with WPB Directive 29 and are mandatory on construction involving contracts placed after November 1. Outstanding contracts for construction requiring stress grades of lumber must be reviewed and the new specifications written in where substantial delay to the war effort will not result.

With the working stress increased by 20 percent, it is estimated there will result a saving of about 150,000 board feet per year, which is a substantial proportion of stress grade lumber production. An estimated saving of 2,500 tons of steel in fixtures used with such lumber also should result from the specifications.

What Is Needed in Standardization?

"Successful standardization calls for vision and imagination to see clearly the problems in their larger and long-term effects on our production. It demands a breadth of view and a statesmanship approach which submerges short-range selfish interests. It requires sound engineering thinking, which considers all aspects of a problem and results in correct decisions. Standards engineers have been given ever-increasing responsibilities and, on the whole, have met their challenge well."

—From "Economic Aspects of Standardization," by B. C. Bolton, Lockheed Aircraft Corporation, *SAE Journal*, June, 1943.



ASA Standards Activities

American Standards

Standards Available Since Our October Issue

Allowable Concentration of Lead and Certain of its Inorganic Compounds American Standard Z37.11-1943 20¢

Standards Approved Since Our October Issue

Allowable Concentration of Toluene American Standard Z37.15-1943

Letter Symbols for Gear Engineering American Standard B6.5-1943

Standards Being Considered by ASA for Approval

Basic Sulfate White Lead, Tentative Specifications for (ASTM D82-42T) Revision of American Standard K7-1941

Carbon-Silicon Steel Plates of Ordinary Tensile Ranges for Fusion-Welded Boilers and Other Pressure Vessels (ASTM A201-39) Revision of American Standard G31.1-1942

Chemical Analysis of Alloys of Lead, Tin, Antimony and Copper (ASTM B18-36T) Revision of K5-1922

Chrome Yellow and Chrome Orange, Tentative Specifications for (ASTM D211-42T) Revision of American Standard K27-1941

Copper-Base Alloy Forging Rods, Bars, and Shapes, Tentative Specifications for (ASTM B124-42T) Revision of American Tentative Standard H7-1939

Low Tensile Strength Carbon-Steel Plates of Structural Quality for Welding (ASTM A78-40) Revision of American Standard G40.1-1942

Spindle Noses and Arbors for Milling Machines B5.18

Tool Shanks and Tool Posts for Lathes, Planes, Shapers, Boring Mills, and Turret Lathes B5.2 Revision of American Standard, Tool Holder Shanks and Tool Post Openings B5b-1929

Standards Submitted to ASA Since Our October Issue

Zinc Coating of Iron and Steel G8

American War Standards

War Standards Approved and Available Since Our October Issue

Dimensions for External Radio-Frequency Thermocouple Converters (120 Milliamperes to 10 Amperes, Inclusive) C39.4-1943 10¢

War Standards Approved and Published

Accuracy of Engine Lathes B5.16-1941 25¢

Allowable Concentrations of Toxic Dusts and Gases
- Allowable Concentration of Cadmium Z37.5-1941 20¢
- Allowable Concentration of Manganese Z37.6-1942 20¢
- Allowable Concentration of Metallic Arsenic and Arsenic Trioxide Z37.9-1943 20¢
- Allowable Concentration of Xylene Z37.10-1943 20¢

Code for Electricity Meters (Revision of Paragraph 827) C12WS-1942 10¢

Color, Specification and Description of Z44-1942 25¢

Components for Military Radio
- Ceramic Radio Insulating Materials, Class L C75.1-1943 20¢
- Ceramic Radio Dielectric Materials, Class H C75.4-1943 20¢
- Electrical Indicating Instruments (2½- and 3½-Inch, Round, Flush-Mounting, Panel-Type) C39.2-1942 50¢
- External Meter Resistors (Ferrule Terminal Styles) C75.5-1943 25¢
- Fixed Composition Resistors C75.7-1943 60¢
- Fixed Mica-Dielectric Capacitors C75.3-1943 50¢
- Glass-Bonded Mica Radio Insulators C75.6-1943 25¢
- Shock-Testing Mechanism for Electrical Indicating Instruments (2½- and 3½-Inch, Round, Flush-Mounting, Panel-Type) C39.3-1943 25¢
- Steatite Radio Insulators C75.2-1943 50¢

Domestic Gas Ranges, Approval Requirements Z21.1ES-1942 $1.00

Gas Water Heaters Approval Requirements Z21.10WS-1942 $1.00

Machine Tool Electrical Standards C74.1942 40¢

Photographic Exposure Computer Z38.2.2-1942 $1.00

Pressure Ratings for Cast-Iron Pipe Flanges and Flanged Fittings, Class 125 B16a1-1943 10¢

Pressure-Temperature Ratings for Steel Pipe Flanges, Flanged Fittings and Valves (Revision of Tables 6 to 11 inclusive, American Standard B16e-1939) B16e5-1943 25¢

Protective Lighting for Industrial Properties A85-1942 50¢

Quality Control
- Guide for Quality Control Z1.1-1941 } In one Volume 75¢
- Control Chart Method of Analyzing Data Z1.2-1941 } In one Volume 75¢
- Control Chart Method of Controlling Quality During Production Z1.3-1942 75¢

Protective Occupational Footwear Z41-1943
- Men's Safety-Toe Shoes Z41.1-1943 (2nd edition) } In one Volume 40¢
- Men's Conductive Shoes Z41.3-1943 } In one Volume 40¢
- Men's Explosives-Operations (Non-sparking) Shoes Z41.4-1943 (2nd edition) } In one Volume 40¢
- Men's Electrical-Hazards Shoes Z41.5-1943 (3rd edition) } In one Volume 40¢
- Men's Foundry (Molders) Shoes Z41.6-1943 (3rd edition) } In one Volume 40¢
- Women's Safety-Toe (Oxford) Shoes Z41.2-1943 (3rd edition) } In one Volume 40¢
- Women's Safety-Toe (High) Shoes Z41.7-1943 (2nd edition) } In one Volume 40¢
- Women's Explosives-Operations (Non-sparking) Shoes Z41.8-1943 (2nd edition) } In one Volume 40¢
- Women's Conductive Shoes Z41.9-1943 (2nd edition) } In one Volume 40¢

Replacement Parts for Civilian Radio
- Dry Electrolytic Capacitors (Home Receiver Replacement Type) C16.7-1943 20¢
- Fixed Paper-Dielectric Capacitors (Home Receiver Replacement Type) C16.6-1943 20¢
- Home Radio Replacement Parts, Simplified List C16.8-1943 20¢
- Power and Audio Transformers and Reactors (Home Receiver Replacement Type) C16.9-1943 25¢

Straight Screw Threads for High-Temperature Bolting B1.4-1942 25¢

War Standards Under Way

Color Code for Lubricants for Machinery Z47

Components for Military Radio C75
- Capacitors
  - Fixed Ceramic-Dielectric Capacitors C75/381*
  - Fixed Molded Paper-Dielectric Capacitors C75/221*
  - Paper-Dielectric Capacitors
- Crystals
  - Crystals and Holders—Aircraft Radio Type
- Dynamotors
- Insulating Materials
  - Glass Radio Insulators C75/275 (Printed draft)
  - Plastics
  - Laminated Thermosetting Plastic Materials (Sheet and Plate)
  - Molded Thermosetting Plastic Materials
  - Thermoplastic Materials (Rigid)
  - Porcelain Radio Insulators

mponents for Military Radio—(Continued)
Resistors
Composition Potentiometers and Rheostats
Fixed Wire-Wound Resistors (Power Type)
Accurate Fixed Wire Wound Resistors (1 percent Maximum Tolerance)
High-Power Variable Wire-Wound Resistors
Low-Power Variable Wire-Wound Resistors
Toggle Switches
Vibrators
linidrical Fits B4
achine Tool Electrical Standards Revision of 4-1942
Photography and Cinematography, Materials and Equipment
Protective Occupational (Safety) Clothing Z51
Replacement Parts for Civilian Radio C16
Volume Controls (Home Receiver Replacement Type)
Resistance Welding Equipment
Safety in Electric and Gas Welding and Cutting Operations
Screw Threads B1
Acme Screw Threads for Aircraft
Truncated Whitworth Screw Threads
Welding Arc Hand Shield and Helmets Z2
Women's Industrial Clothing L17

British and American Experts Confer on Screw Threads

A BRITISH Screw Thread Commission has just arrived in the United States to confer with American experts on screw thread standardization. Plans for the conferences were made by the War oduction Board in cooperation with the Lend-Lease dministration and the British Standards Institution. Members of the British Commission are:

F. W. Elstub, Alfred Herberts, Ltd
Percy Good, director, British Standards Institution
Stanley J. Harley, assistant director, Coventry Gauge, Ltd.
Sir Percy Mills, director, Machine Tool Control

The War Production Board has appointed the following committee to meet with the British Commission: H. W. Bearce, National Bureau of Standards; K. D. Williams, Bureau of Ships, Navy Department; Colonel H. B. Hambleton, Ordnance Department, U. S. Army; C. E. Richardson, Army-Navy Aeronautical Board; A. M. Houser, WPB Conservation Division; P. G. Agnew, American Standards Association. Howard Coonley, director of the WPB Conservation Division, will act as chairman.

Discussions Important

The proposed discussions, it is expected, will be important particularly with a view to the unification of screw thread practices in the United Nations during the war emergency. Such unification will probably have an influence also on efforts toward general international unification in this field, after the war is over. The following have been scheduled for discussion:

(1) Problems involved in the production of British Standard Whitworth threads, and of Screw Threads of Truncated Whitworth form, including the production of threading tools and gages. [NOTE: An American War Standard, Screw Threads of Truncated Whitworth Form, is being developed by an ASA War Committee by request of the War Production Board.]

(2) Comparison of American and British practices of gaging threaded parts and measuring threading tools and gages.

(3) Fits between threads on studs and tapped holes in aircraft engine parts made of non-ferrous alloys, especially with a view to differences between American practice as laid down in the SAE Aeronautical Standard ARP 142, Stud Fits and Tolerances (Steel in Aluminum or Magnesium Alloys), and the latest British practice mainly used in the production of the Merlin engine.

(4) Use of glass gages in the United States, results obtained with them, and possible plans for extending their use.

(5) Submittal "for consideration" of present British Standards for Acme threads, fire hose coupling threads, pipe threads (straight and taper), compressed gas cylinder threads, taps, limits and fits, screw thread gages, and plain gages.

The British mission has also indicated that it would like to discuss again the possibility of unifying the British Standard Whitworth and American Standard systems of screw threads in regard to nominal diameter, pitch, and form of thread.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933

Of Industrial Standardization, published once a month at New York, N. Y., for Oct. 1, 1943.

State of New York, County of New York, ss.

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Ruth E. Mason, who, having been duly sworn according to law, deposes and says that she is the editor of the Industrial Standardization and that the following is, to the best of her knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, American Standards Association, 29 West 39th St., New York 18, N. Y. Editor, Ruth E. Mason, 29 West 39th St., New York 18, N. Y. Managing Editor, none. Business Managers, None.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.) American Standards Association, 29 West 39th St., New York 18, N. Y. R. E. Zimmerman, President (Vice-president, U. S. Steel Corp.) 29 West 39th St., New York 18, N. Y. P. G. Agnew, Secretary, 29 West 39th St., New York 18, N. Y.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the twelve months preceding the date shown above is..... This information is required from daily publications only.)

RUTH E. MASON,
Editor.

Sworn to and subscribed before me this 1st day of October, 1943.

(Seal)

LYDA I. SJOHOLM,
Notary Public.
New York Co. Clk's No. 851.
Bronx Co. Clk's No. 168.
(My Commission expires March 30, 1945.)

American Standard Building Code Requirements

for

Structural Steel

(Riveted, Bolted, or Welded Construction)

40¢

(quantity prices on request)

The requirements presented in this new standard are intended to govern the design, fabrication, and erection of structural steel for buildings and other structures covered by building code requirements.

Developed under the technical leadership of the American Institute of Steel Construction and the American Society of Civil Engineers.

OTHER RELATED BUILDING STANDARDS

American Standard Methods of Fire Tests of Building Construction and Materials (A2.1-1942)	$ .25
American Standard Methods of Fire Tests of Door Assemblies (A2.2-1942)	.25
Building Exits Code (A9.1-1942)	1.00
Manual of Accident Prevention in Construction (A10.1-1939)	2.00
American Standard Safety Code for Floor and Wall Openings, Railings, and Toe Boards (A12-1932)	.20
American Standard Safety Code for Elevators, Dumbwaiters, and Escalators (A17.1-1937) (including 1942 Supplement)	1.25
American Recommended Practice for the Inspection of Elevators (A17.2-1937)	.75
American Standard Specifications for Gypsum Plastering, including Requirements for Lathing and Furring (A42.1-1942)	.25
American Standard Building Requirements for Reinforced Gypsum Concrete (A59.1-1941)	.25
National Electrical Code (C1-1940)	.05
American Standard Specifications for Portable Steel and Wood Grandstands (Z20.1-1941)	.40

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